

The conservation and research of the waterbirds and their habitat in China

CHU Guo-Zhong HOU Yun-Qiu QIAN Fa-Wen LU Jun DAI Ming
(The National Bird Banding Center of China, Chinese Academy of Forestry)

1. Forward

1.1 The resource of the waterbirds in China

According to the “Ramsar Convention”, the waterbirds are broadly defined as “the birds depend on the wetlands for their living”, including what we used to say: ducks and geese, shorebirds and waders, and some other species living depend on wetlands, such as kingfishers, raptors and some passerines. However, there are only 20 families of birds are included in the Species List of “Ramsar Convention”. Excepting the *Glareolidae*, they are all natatorial birds, wading birds and shorebirds. In these 20 families, there are at least 404 species occur in Asia-Pacific region and 243 species of them are migratory birds. (Asia-Pacific Migratory Waterbird Conservation Strategy 1996-2000 .)

China has 8 orders, 23 families, about 218 species of waterbirds (Appendix 1).

In the totally 15 species of the cranes in the world, 9 species occur in China. The Black-necked crane is a plateau species which breeding only in China. The Red-crowned crane and White-naped crane are broadly breeding and wintering in the wetlands in China. Most of the cranes migrate internationally.

There are totally 148 (or 149) species of *Anatidae* in the world, China has 46 species. Most of them migrate internationally. It is reported that 47 species and subspecies of *Anatidae* migrate along the Eastern Asia route, China has 43 species and subspecies.

Shorebirds include Jacanidae(jacanas), Haematopodidae(oystercatchers), Recurvirostridae, Glareolidae(pratincoles), Charadriidae(plovers) and Scolopacidae(sandpipers). China has about 64 species.

China is also rich in *Ardeidae*(about 20 species), Ciconidae(5 species), Threskiornithidae(6 species), Laridae(about 34 species) and divers, grebes and cormorants (Appendix 1). Many of them are endangered and endemic species such as the Crested ibis, Chinese egret, White-eared night heron, Oriental stork, Black-faced spoonbill, Relict gull and Saunders’ gull. These species are of great value to the conservation in Asia-Pacific region and even in the world (Appendix 2).

1.2 The wetlands in China

Wetlands are the environments where waterbirds rely on for living. The 26 types of natural wetlands and 9 types of artificial wetlands defined by the “Ramsar Convention” are all distributed in China. Moreover, China has some types which are not in the Ramsar’s List, such as the Swamped

black-necked cranes.

The wetlands in China are not only abundant in types, but also have wide distribution, large areas (more than 67500,000ha, it is about 10% of the size of the wetlands in the world, especially the artificial wetlands have large areas and broad distribution) and abundant biodiversity. According to the preliminary sort out by the “compiler group of China wetland conservation action plan”, there are about 214 important wetlands.

1.3 The migration route of the waterbirds in China

Some of Chinese the waterbirds do not migrate outside the country. For example, the crested ibis just occurs in Yangxian county of Shaanxi province. However, most of the others migrate internationally. The bird banding recoveries in the past twenty years indicate that, in China, some of the ducks and geese, cranes, plovers and sandpipers migrate to India, Australia, Japan and Russia (Figure 1-2). We suggest that China is on the “Asia-Pacific migration route” (although we have recover the banded birds from USA). In this region, Chinese waterbirds migrate mainly along the “Central Asia-India route” and “Eastern Asia-Australia route”. Sometimes the routes may be overlapped (Figure 3).

2. The conservation status of the waterbirds in China

The waterfowl in China is abundant. The available wetlands provide breeding, wintering and important stop-over places for many waterbirds. However, with the increasing of population and the rapid development of industry, the waterbirds in China are under threatened. The main threats are: habitat loss, habitat degeneration and over-hunting.

In the recent years, especially in the recent 20 years of reform and development, the government and the public has paid more and more attentions to the conservation of environment and wildlife. Environmental conservation has been decided as one of the basic policies of the State. We suggest that the habitat loss and habitat degeneration are the most important factors threatening the waterbirds in China. The illegal hunting and over-hunting are the direct factors influence the survival of the waterbirds. The actions should be done both on the conservation of waterbirds and their habitats.

2.1 The related policy and legislation to the conservation of wetlands and waterbirds

At present, China has made 15 issues of laws and 20 issues of administration regulations which related to the conservation of wetlands and waterbirds. Moreover, according to the national laws, the local governments have made some measurements and local regulations in the light of their special conditions. To a certain degree, these laws and decrees have met the local needs for conservation of wetlands and waterbirds. But till now, China has no law particularly to the conservation of wetlands and waterbirds. In the meantime, quite a lot of people in China have few sense of legality, and the

laws are not enforced strictly.

From the central to local government, many departments are involved in the conservation of wetlands and waterbirds, and they have really conducted many useful actions. At present, no “wetland management department” has been set up directly under the State Council. The compilation of “the Action Plan of Wetlands Conservation in China” is lead by the Forestry Administration and involve another 17 Ministries, Committees and Bureaus in.

In China, at the State level, the wildlife is mainly managed by the Forestry Administrations (for terrestrial wildlife) and the Agricultural Administrations (for aquatic wildlife). Organizations such as “the Wildlife Saving Center” and the “Administration Office for the Imports and Exports of Endangered Species” are set up. They play very important roles to protect the endangered waterbirds and to forbid the illegal hunting. At the province level, the Forestry Administration has a special department which is responsible for the management of wildlife. However, in the local counties and countries, the wildlife management are usually considered by the forestry guards. The administration setups are not amplified, the staffs are limited and the funds are not enough.

2.2 National plans related to the conservation of wetlands and waterbirds

In 1994, China’s Agenda 21 was approved and published by the State Council; in the same year, The Action Plan for the Conservation of China’s Biodiversity was also completed. Presently, The Action Plan for the Conservation of China’s Wetlands (the 4th draft) is being compiled. In this book, a special action plan has been made out for the conservation of waterbirds and their habitats.

2.3 Propaganda and education

The conservation of environment and wildlife could indicate the civilization level of a country and nationality. Improve the conservation senses of the public, especially to the leaders is very important. In the past several years, many fashions were used all over the country to propaganda the significance of wildlife conservation, such as “Love-the-Bird Week” in April or May and “Wildlife Conservation Month” in November. After China joined the “Ramsar Convention”, propaganda of wetlands and waterbirds conservation were enhanced and paid great attention. The CCTV programs such as “Man and Nature” and “Toshiba Zoo” have improved the public conservation senses. Certainly, the propaganda methods in China are undeveloped; and there is a big difference between the cities and countries. Compare with the developed countries, the conservation volunteers in China are very few. The publics involved in the “bird loving and bird watching” are very limited. At present, the NGO such as “Friend of Nature” and “Green Homeland” have attracted some conservation volunteers. Their actions could promote the conservation senses of Chinese people.

2.4 Key protected wildlife

In China, the State, provinces and some counties have determined their key protected wildlife

species. There are 11 species of waterbirds are listed in the first class of state key protected animals and another 22 species are in the second class. Some rare and endangered species, such as the red-crowned crane, white-naped crane and the crested ibis, are not only protected in the nature reserves, but also be bred in captivities. The crested ibis is one of the critical species of the world. When they were recovered in Yangxian county in 1981, there were only seven individuals. Now, after the conservation efforts and international supports, the wild population has been increased to 64 birds, and there are about 50 birds raised in captivities.

2.5 Nature reserves

Since the 1970s, China starts to set up nature reserves to protect the waterbirds. The first two reserves are the Bird Island in Qinghai lake and Zhalong reserve in Heilongjiang province. Till March 1997, China has set up 152 wetland reserves and 60 waterfowl reserves. Among these reserves, seven sites are “International Important Wetlands”, four sites are “Important Sites to the Cranes in Northeast Asia” and four sites are “Important places to the plovers and sandpipers of Eastern Asia-Australia”.

Many nature reserves in China are in remote regions. Since the shortage of fund and staff, the functions of these reserves have not been brought into full play. In the future, the range size of the nature reserves should be increased, the management system should be improved.

2.6 Make rational use and forbid the hunting and catching of waterbirds

Historically, using wildlife is a custom all over the country. Moreover, the ducks and geese are main hunting species. After the publish of the “Law on the Protection of Wildlife” in 1988, broad scale of hunting and catching are almost stopped. In the recent years, the manufacture and use of rifles are controlled strictly. It is benefit to forbid and management the illegal hunting. In Jilin province, hunting has been forbidden for five years and achieved good results. Because there is no research on the aspect of “available population”, what we can do at present is just to forbid hunting and catching. However in some places, the illegal hunting and catching are still happened . Some swans, cranes, ducks and geese are poisoned by the pesticides occasionally.

2.7 International cooperation

On the aspect of the conservation of waterbirds and their habitats, China has developed the international exchange and cooperation broadly. A series of multilateral agreements have been signed. The major ones are: “CITES” (joined in 1981), “Ramsar Convention” and “Convention on Biological Diversity” (joined in 1992). China has also involved in “Conservation Strategy of Migratory Birds in Asia-Pacific: 1996-2000” supported and setup the “Crane site network in Northeast Asia” and “Shorebird site network in Eastern Asia -Pacific”. “Anatidae site network in the East Asia flyway” will be set up recently. We consider it is very important and necessary to develop international exchange and cooperation. Of course, international cooperation could not substitute for the conservation efforts by our own. But being a developing country, we should pay attention and look forward to gathering

funds and techniques through cooperation, in order to train and develop the conservation team and improve the research capability of the waterbirds and their habitats.

China has wide connections and cooperation with international organizations such as WWF, WI, UNDP, IUCN, ICF and CITES. The bilateral agreements between Sino-Japanese and Sino-Australian on the conservation of migratory birds and the “Sino-Russia Agreement on Xingkai Lake Nature Reserve” have taken further steps to protect the waterbirds and their habitats.

3. The investigation and research of the waterfowl resource in China

We have to realized that China has limited ornithologists and the people who study on waterbirds are more fewer. However, base on the accumulation of several decades, Chinese ornithologists have a relative clear understand to the fauna, distribution and ecological habits of the waterbirds in China. Some intensive studies have been conducted on the distribution, population ecology, threats and captive breeding of some endangered and rare species, such as the red-crowned crane, crested ibis, swan, relict gull and Saunders’ gull. According to the bird banding and recovery information in the past twenty years, we have preliminary found out the migration route and regulation of some species, such as bar-headed goose, red-crowned crane and some shorebirds. At present, the species and the number of banded birds are relatively very few. Some regions have no bird banding information. So, much supplement study should be done to get a clear understanding of the migration route, regulation and important stop-over site of the waterbirds in China.

In the recent years, leaded by the forestry administration, a national investigation of terrestrial wildlife have been conducted. It also includes the investigation of waterbirds. Till now, some special surveys, such as the survey of Saunders’ gull, have been completed and achieved a good result. This investigation could also cause the attentions of government departments and propaganda the significance of wetland and waterfowl conservation.

Concluding remarks

In the recent twenty years, the conservation and research of the waterbirds and their habitats in China have made remarkable progress and achievements. However, comparing with the increasing threats, comparing with the advanced techniques and conservation theories, we still have a long way to go. The related administration has realized the importance and paid more attention to the research to satisfy the needs of conservation. At present, the government departments, institutions and international organizations should make joint efforts to work out a really practicable “Action Plan for the Conservation of the Waterbirds and their Habitats in China”.